

## CONDENSED CLIMATOLOGICAL SUMMARY.

In the following table are given for the various sections of the climatological service of the Weather Bureau the monthly average temperature and total rainfall; the stations reporting the highest and lowest temperatures, with dates of occurrence; the stations reporting the greatest and least total precipitation; and other data, as indicated by the several headings.

The mean temperature for each section, the highest

and lowest temperatures, the average precipitation, and the greatest and least monthly amounts are found by using all trustworthy records available.

The mean departures from normal temperatures and precipitation are based only on records from stations that have 10 or more years of observations. Of course the number of such records is smaller than the total number of stations.

Condensed climatological summary of temperature and precipitation by sections, December, 1915.

Section.	Temperature.								Precipitation.							
	Section average.		Departure from the normal.		Monthly extremes.				Section average.		Departure from the normal.		Greatest monthly.		Least monthly.	
	° F.	° F.	Station.	Highest.	Date.	Station.	Lowest.	Date.	Ins.	Ips.	Station.	Amount.	Station.	Amount.	Ins.	Ips.
Alabama...	46.8	+0.8	Daphne.....	79	16	Cordova.....	44	6	6.21	+1.63	Cordova.....	11.42	Alaga.....	1.66		
Arizona...	43.5	+0.6	Cavecreek (near).....	87	5	St. Michaels.....	-14	28	2.71	+1.39	Allen Lake, Ranger station.....	9.50	Yuma.....	0.12		
Arkansas.....	43.9	+2.4	Eldorado.....	78	21	Dodd City.....	41	16	4.73	+0.72	Jonesboro.....	9.60	Fort Smith.....	1.97		
California.....	45.7	-1.0	2 stations.....	88	27	Maddelin.....	-13	30	5.56	+1.33	Branscomb.....	18.61	3 stations.....	0.00		
Colorado.....	26.7	+2.4	Las Animas.....	38	9	Dillon.....	-33	25	1.22	+0.15	Savage Basin.....	5.06	Springfield.....	0.09		
Florida.....	56.6	-2.3	Hornestead.....	46	29	3 stations.....	-5	21	2.58	-0.33	Satsuma Heights.....	5.34	Homestead.....	0.77		
Georgia.....	45.9	-1.0	2 stations.....	79	16	Ramhurst.....	19	21	4.90	+0.73	Clayton.....	11.05	Hawkinsville.....	1.36		
Hawaii (November).....	71.4	.....	3 stations.....	89	11	2 stations.....	47	20	16.19	.....	Hukuhau, Hawaii.....	55.82	Mahukona, Hawaii.....	0.94		
Idaho.....	27.0	+0.5	Gulley.....	65	1	Pierson.....	44	30	2.64	+0.34	Flik Creek.....	7.24	Oakley.....	0.25		
Illinois.....	29.9	-0.2	2 stations.....	63	16	Lincoln.....	-11	28	2.89	+0.65	Equality.....	9.08	Galova.....	0.18		
Indiana.....	30.8	-0.7	Huntingburg.....	52	22	Collegeville.....	-10	14	4.24	+1.33	Rome.....	9.38	Notre Dame.....	0.32		
Iowa.....	25.0	+1.1	Northboro.....	56	14	6 stations.....	-1	27	4.24	-0.73	Storm Lake.....	1.70	Charlton.....	T.		
Kansas.....	34.7	+2.5	Richfield.....	77	9	Colidge.....	-11	28	0.59	-0.33	Fort Scott.....	3.41	3 stations.....	T.		
Kentucky.....	36.9	-0.6	4 stations.....	64	16	Scott.....	9	15	7.54	+3.75	Calhoun.....	10.02	Elkville.....	5.28		
Louisiana.....	52.8	+1.2	St. Gabriel.....	88	16	Kelly.....	18	3	4.25	-0.37	Lake-side.....	7.38	Reserve.....	0.99		
Maryland-Delaware.....	33.1	-1.3	Falshbury, Md.....	73	20	Oakland, Md.....	-6	11	3.16	-0.38	Oakland, Md.....	4.88	Western Port, Md.....	1.70		
Michigan.....	24.4	-0.7	Durand.....	51	18	Watersmeet.....	-20	28	1.65	-0.55	Ewen.....	4.50	Mackinaw.....	0.65		
Minnesota.....	18.4	+2.5	Redwood Falls.....	59	8	Angus.....	-23	27	6.61	-0.27	Littlefork.....	1.34	Beard-ley.....	0.10		
Mississippi.....	48.5	+0.9	Waynesboro.....	80	16	Moorhead.....	18	3	5.73	+0.63	Holly Springs.....	8.24	Marmota.....	3.04		
Missouri.....	34.7	+1.3	Deon.....	84	3	Lamonte.....	-13	28	2.77	+0.55	Carruthersville.....	9.38	Bethany.....	0.35		
Montana.....	24.7	+1.4	Wheaton.....	68	4	Bowen.....	-41	30	0.96	+0.23	Heron.....	5.01	Penwells Ranch.....	0.10		
Nebraska.....	28.4	+2.3	Bridgeport.....	73	22	2 stations.....	-18	27	0.71	-0.03	Hay Springs.....	2.42	Plainview.....	0.10		
Nevada.....	32.7	+1.8	Las Vegas.....	81	2	San Jacinto.....	-29	30	0.93	-0.24	Marlette Lake.....	6.03	Battle Mountain.....	0.02		
New England.....	27.4	+0.9	Chestnut Hill, Mass.....	62	26	Etno burg Falls, Vt.....	-23	31	4.34	+0.91	Cream Hill, Conn.....	7.52	Putten, Me.....	2.40		
New Jersey.....	31.9	-1.2	Moorestown.....	64	26	Clarksville, Vt.....	3	22	4.82	+0.99	Little Falls.....	7.83	Vineyard.....	2.19		
New Mexico.....	36.5	+1.8	Deming.....	82	8	Fitzelizabethtown.....	-28	24	0.80	+0.04	Chama.....	3.10	Bluewater.....	T.		
New York.....	25.8	-0.4	Setauket.....	59	26	Indian Lake.....	-23	31	4.24	+1.07	Adams Center.....	11.33	Avon.....	1.07		
North Carolina.....	39.8	-2.1	Greenville.....	78	29	Jefferson.....	10	7	4.39	+0.68	Highlands.....	14.32	Sanatorium.....	0.94		
North Dakota.....	15.7	+2.8	Mott.....	57	8	Willow City.....	-27	17	0.53	+0.02	Hansboro.....	2.10	Orange.....	0.00		
Ohio.....	30.4	-0.9	Ironout.....	62	17	Victery.....	1	29	3.84	+0.82	Syracuse.....	6.05	Montpelier.....	1.33		
Oklahoma.....	43.0	+3.9	Eldorado.....	79	15	Hoover.....	-15	25	0.78	-0.62	Calvin.....	3.57	2 stations.....	0.00		
Oregon.....	27.1	+0.2	Pendleton.....	67	8	2 stations.....	-21	30	5.41	+1.40	Glenora.....	20.16	Beckley.....	0.02		
Pennsylvania.....	29.4	-1.5	Lebanon.....	70	25	Honesdale.....	-7	31	4.06	+0.82	Irifton.....	6.53	Mount Pocono.....	1.36		
Porto Rico.....	75.8	+1.1	3 stations.....	95	67	Alvinita.....	53	13	5.30	+0.23	Rio Grande (El Verde).....	45.14	3 stations.....	0.00		
South Carolina.....	44.2	-2.2	2 stations.....	79	29	2 stations.....	17	21	3.27	-0.15	Mountain Rest.....	10.08	Columbia.....	1.41		
South Dakota.....	24.0	+2.3	Cottonwood.....	70	7	McIntosh.....	-21	31	0.55	-0.08	Dumont.....	1.78	Murdo.....	T.		
Tennessee.....	40.7	+1.3	Ashwood.....	73	16	Mountain City.....	8	15	7.01	-2.03	Perryville.....	9.83	Mountain City.....	4.32		
Texas.....	52.0	+3.3	5 stations.....	90	47	Stratford.....	-12	29	1.95	-0.46	Sugarland.....	7.14	4 stations.....	0.00		
Utah.....	28.3	+2.0	2 stations.....	68	47	Scotfield.....	-21	19	1.26	+0.25	Mosh.....	5.75	Randolph.....	0.05		
Virginia.....	35.8	-1.3	Ivor.....	76	29	Fredericksburg (near).....	6	15	2.96	-0.23	Elk Knob.....	6.62	Wachapreague.....	0.52		
Washington.....	33.8	0.0	Dayton.....	87	21	Newport.....	-20	30	6.75	+1.71	Forks.....	27.88	Odessa.....	1.05		
West Virginia.....	32.8	-0.8	4 stations.....	65	17	2 stations.....	0	11	4.35	+1.09	Pickens.....	7.19	Upper Tract.....	1.35		
Wisconsin.....	21.7	+1.3	La Crosse.....	50	7	Long Lake.....	-24	28	0.77	-0.75	Rest Lake.....	1.89	Darlington.....	0.14		
Wyoming.....	23.8	+2.1	Wheatland.....	76	97	Moran.....	-46	31	0.92	+0.10	Sand Lake.....	3.47	Hyattville.....	0.00		

† Other dates also.

## DESCRIPTION OF TABLES AND CHARTS.

Table I gives the data ordinarily needed for climatological studies for about 158 Weather Bureau stations, making simultaneous observations at 8 a. m. and 8 p. m., daily, 75th meridian time, and for about 41 others making only one observation. The altitudes of the instruments above ground are also given.

Table II gives a record of precipitation, the intensity of which at some period of the storm's continuance equaled or exceeded the following rates:

Duration (minutes).....	5	10	15	20	25	30	35	40	45	50	55	60
Rates per hour (inches).....	3.00	1.80	1.40	1.20	1.08	1.00	0.94	0.90	0.87	0.84	0.81	0.8

It is impracticable to make this table sufficiently wide to accommodate on one line the record of accumulated falls that continue at an excessive rate for several hours. In this case the record is broken at the end of each 50 minutes, the accumulated amounts being recorded on successive lines until the excessive rate ends.

In cases where no storm of sufficient intensity to entitle it to a place in the full table has occurred the greatest precipitation of any single storm has been given, also the greatest hourly fall during that storm.

The tipping-bucket mechanism is *dismounted* and removed when there is danger of snow or water freezing in the same. Table II records this condition by entering an asterisk (\*).

Table III gives, for about 30 stations of the Canadian Meteorological Service, the means of pressure and temperature, total precipitation and depth of snowfall, and the respective departures from normal values except in the case of snowfall.

Chart I.—Hydrographs for several of the principal rivers of the United States.

Chart II.—Tracks of centers of high areas; and

Chart III.—Tracks of centers of low areas. The roman numerals show the chronological order of the centers. The figures within the circles show the days of the month; the letters *a* and *p* indicate, respectively, the observations at 8 a. m. and 8 p. m., 75th meridian time. Within each circle is also given (Chart II) the last three figures of the highest barometric reading or (Chart III) the lowest reading reported at or near the center at that time, and in both cases as reduced to sea level and standard gravity.

Chart IV.—Temperature departures. This chart presents the departures of the monthly mean temperatures from the monthly normals. The normals used in computing the departures were computed for a period of 33 years (1873 to 1905) and are published in Weather Bureau Bulletin "R," Washington, 1908. Stations whose records were too short to justify the preparation of normals in 1908 have been provided with normals as adequate records became available, and all have been reduced to the 33-year interval 1873-1905. The shaded portions of the chart indicate areas of positive departures and unshaded portions indicate areas of negative departures. Generalized lines connect places having approximately

equal departures of like sign. This chart of monthly temperature departures in the United States was first published in the MONTHLY WEATHER REVIEW for July, 1909.

Chart V.—Total precipitation. The scale of shades showing the depth is given on the chart. Where the monthly amounts are too small to justify shading, and over sections of the country where stations are too widely separated or the topography is too diversified to warrant reasonable accuracy in shading, the actual depths are given for a limited number of representative stations. Amounts less than 0.005 inch are indicated by the letter T, and no precipitation by 0.

Chart VI.—Percentage of clear sky between sunrise and sunset. The average cloudiness at each Weather Bureau station is determined by numerous personal observations between sunrise and sunset. The difference between the observed cloudiness and 100 is assumed to represent the percentage of clear sky, and the values thus obtained are the basis of this chart. The chart does not relate to the nighttime.

Chart VII.—Isobars and isotherms at sea level and prevailing wind directions. The pressures have been reduced to sea level and standard gravity by the method described by Prof. Frank H. Bigelow on pages 13-16 of the REVIEW for January, 1902. The pressures have also been reduced to the mean of the 24 hours by the application of a suitable correction to the mean of the 8 a. m. and 8 p. m. readings at stations taking two observations daily, and to the 8 a. m. or the 8 p. m. observation, respectively, at stations taking but a single observation. The diurnal corrections so applied will be found in the Annual Report of the Chief of the Weather Bureau, 1900-1901, volume 2, Table 27, pages 140-164.

The isotherms on the sea-level plane have been constructed by means of the data summarized in chapter 8 of volume 2 of the annual report just mentioned. The correction,  $t_0 - t$ , or temperature on the sea-level plane minus the station temperature as given by Table 48 of that report, is added to the observed surface temperature to obtain the adopted sea-level temperature.

The prevailing wind directions are determined from hourly observations at the great majority of the stations; a few stations having no self-recording wind-direction apparatus determine the prevailing direction from the daily or twice-daily observations only.

Chart VIII.—Total snowfall. This is based on the reports from regular and cooperative observers and shows the depth in inches and tenths of the snowfall during the month. In general, the depth is shown by lines inclosing areas of equal snowfall, but in special cases figures are also given. Chart VIII is published only when the general snow cover is sufficiently extensive to justify its preparation.

Chart IX.—Average values of pressure, temperature, and prevailing wind directions, and storm tracks over the North Atlantic Ocean, for the corresponding month of last year.

TABLE I.—Climatological data for United States Weather Bureau stations, December, 1915.

Districts and stations.	Elevation of instruments.			Pressure.			Temperature of the air.												Precipitation.			Wind.			Average cloudiness.			Total snowfall.		
	Buoyometer above sea level.	Thermometer above ground.	Anemometer above ground.	Station, reduced to mean of 24 hours.	Sea level reduced to mean of 24 hours.	Departure from normal.	Mean max + mean min. + 2.	Mean maximum.	Mean minimum.	Departure from normal.	Maximum.	Date.	Mean max + mean min. + 2.	Mean maximum.	Mean minimum.	Greatest daily range.	Mean relative humidity.	Total.	Departure from normal.	Days with 0.1 or more.	Miles per hour.	Prevailing direction.	Cloudy days.	Clear days.	Partly cloudy days.	Cloudy days.	Snow on ground at end of month.			
	Ft.	Ft.	Ft.	In.	In.	In.	° F.	° F.	° F.	° F.	° F.	° F.	° F.	° F.	° F.	%	In.	4.05 + 0.7	Miles	Direction.	Date.	In.	In.	In.	In.	In.				
New England.																														
Eastport.	76	67	83	29.75	29.84	-0.14	29.6 + 4.3	53	26	35	-1	31	29	23	27	77	3.82 - 0.2	13	10,539	w.	63	ne.	14	4	5	22	7.7	4.4	1.0	
Greenville.	1,070	6	28.68	29.89	-	22.0	44	26	28	-1	31	16	23	26	4.84 + 1.2	15	4.84 + 1.2	10	7,301	nw.	54	nw.	26	11	1	13	5.8	12.1	5.0	
Portland, Me.	103	82	117	29.79	29.92	-1.1	29.4 + 2.3	50	26	35	12	31	24	23	26	3.42 + 0.1	12	4.476	nw.	40	nw.	26	12	3	16	6.1	14.2	4.4		
Concord.	283	70	79	29.60	29.93	-0.08	27.8 + 1.4	56	34	11	31	23	29	20	5.61 + 0.9	15	8,581	s.	42	s.	26	17	2	5	24	24	8.7			
Burlington.	404	11	48	29.51	29.97	-0.08	25.2 + 2.7	44	25	30	-15	31	15	32	20	2.76 + 0.0	11	5,339	s.	35	nw.	26	3	4	14	5.4	24.5	12.2		
Boston.	876	12	60	28.99	29.97	-0.08	22.3 + 2.6	48	26	30	16	31	28	31	20	3.94 + 0.5	12	8,849	w.	52	ne.	13	14	15	6.7	6.7	4.0			
Northfield.	125	115	188	29.79	29.93	-1.12	34.4 + 2.6	59	61	18	30	21	11	30	23	3.81 + 0.2	14	13,504	nw.	52	sw.	26	14	4	14	6.7	3.2			
Nantucket.	12	14	90	29.99	29.91	-1.12	35.6 + 1.1	55	57	18	41	21	11	30	25	3.2	19	17,159	nw.	56	w.	26	16	8	4	10	7.0	0.1		
Block Island.	26	11	46	29.91	29.94	-1.12	35.6 + 1.6	56	58	18	40	11	12	25	25	4.91 + 1.1	12	10,04	nw.	82	nw.	26	11	9	11	5.5	3.5	2.2		
Narragansett Pier.	9																													
Providence.	160	215	251	29.75	29.95	-1.13	31.7 + 0.1	59	18	38	14	12	25	25	29	3.80 + 0.1	10	11,04	nw.	58	nw.	26	12	14	10	5.6	18.0	2.7		
Hartford.	159	122	140	28.98	29.97	-1.10	30.4 + 0.6	56	20	37	11	31	24	26	28	4.78 + 2.1	10	7,314	nw.	61	nw.	26	9	9	12	10	6.6			
New Haven.	106	117	155	29.84	29.97	-1.10	32.0 + 0.2	55	26	38	15	31	26	27	28	5.78 + 2.1	10													
Middle Atlantic States.							34.6 - 1.2										72	3.64 + 0.5										6.3		
Albany.	97	102	115	29.88	29.99	-0.09	28.2 + 0.7	46	26	34	2	31	23	25	26	6.35 + 3.8	12	5,997	nw.	29	nw.	26	8	6	17	6.9	40.3	9.4		
Blairstown.	871	10	63	29.03	29.99	-1.14	27.4 + 0.3	48	25	32	12	31	22	26	29	3.82 + 1.4	15	3,232	nw.	24	nw.	26	6	8	23	8.4	20.1	6.4		
New York.	314	414	454	29.70	30.01	-0.01	33.5 - 0.5	55	18	39	17	31	26	26	29	4.23 + 0.8	8	15,885	nw.	90	nw.	26	4	12	15	6.8	8.1			
Harrisburg.	374	94	104	29.60	30.07	-0.05	32.1 + 0.7	54	25	37	19	12	27	21	28	3.35 + 0.7	10	5,834	nw.	38	nw.	26	4	14	13	6.5	4.7			
Philadelphia.	117	123	190	30.04	30.09	-0.07	35.0 + 0.7	57	60	25	41	19	12	26	25	4.22 + 1.2	9	4,385	nw.	42	nw.	18	12	9	10	6.0	6.0			
Reading.	323	81	98	29.69	31.01	-0.08	32.6 + 0.7	59	25	38	19	12	27	23	25	4.37 + 1.0	8	6,404	nw.	30	nw.	26	3	14	15	6.8	8.0			
Scranton.	813	111	119	29.14	30.02	-0.08	39.4 + 0.4	55	25	35	16	25	24	24	31	4.66 + 2.0	12	5,749	sw.	34	w.	26	11	6	14	5.9	17.9	2.3		
Atlantic City.	57	37	48	29.99	30.04	-0.06	31.8 + 1.6	55	25	41	20	11	28	23	31	4.41 + 0.7	9	6,572	nw.	33	nw.	26	11	6	14	6.8	6.8			
Cape May.	18	13	49	30.06	30.07	-0.04	35.6 + 2.4	54	25	41	23	31	30	29	24	2.42 + 1.4	9	8,189	nw.	38	w.	26	11	9	13	5.3	1.3			
Stony Brook.	22	10	51	29.98	30.01	-0.01	33.6 + 0.7	57	18	58	20	15	29	23	31	4.31 + 1.0	10	15,017	nw.	76	w.	26	8	13	17	5.9	9.8			
Trenton.	190	153	188	31.02	31.02	-0.01	32.4 + 0.7	58	25	41	21	32	30	27	30	4.44 + 1.3	9	9,435	nw.	64	w.	26	8	13	12	6.5	9.5			
Batture.	12	10	113	29.94	30.08	-0.05	35.4 + 1.5	58	25	41	21	32	30	27	30	3.08 + 0.0	8	5,328	nw.	26	e.	26	9	15	7	5.4	4.3			
Washington.	112	62	87	29.93	30.08	-0.05	35.2 + 0.9	61	25	42	21	16	26	26	30	2.80 + 0.4	9	5,711	nw.	40	nw.	26	9	12	20	5.7	3.8			
Lynchburg.	681	153	188	29.93	30.09	-0.05	38.0 + 0.3	67	25	46	20	11	36	33	32	2.37 + 0.9	9	5,632	nw.	37	nw.	26	8	9	14	6.2	2.7			
Norfolk.	91	170	211	29.99	30.09	-0.04	40.5 + 2.5	75	29	47	22	15	34	32	35	2.26 + 1.2	10	10,802	n.	58	w.	25	12	11	8	4.9	4.0			
Rhinemond.	143	11	52	29.93	30.09	-0.05	37.7 + 3.2	71	29	46	19	15	32	33	32	1.93 + 1.1	9	5,834	s.	50	sw.	25	11	7	13	5.1	0.6			
Wytheville.	2,293	49	55	27.63	31.09	-0.06	33.2 + 2.1	57	17	41	16	27	26	32	25	3.45 + 0.3	9	5,871	w.	40	w.	26	20	8	9	14	6.4			
South Atlantic States.							45.2 - 1.9									73	2.66 - 1.0										4.2			
Asheville.	2,257	70	84	27.69	30.13	-0.03	37.6 + 0.2	61	29	46	20	21	26	34	32	2.70 + 0.2	7	5,01 + 1.0	8	7,450	nw.	44	se.	17	13	8	10	4.9	6.6	
Charlotte.	773	153	161	28.25	30.11	-0.05	41.4 + 1.5	60	29	49	26	21	33	31	36	3.53 + 0.3	10	7,474	sw.	58	sw.	26	11	13	12	4.8	0.4			
Hatteras.	11	12	59	30.05	30.09	-0.04	44.8 + 4.0	69	23	51	31	21	32	29	32	3.12 + 2.1	6									4.0				
Manteo.	12	4	46				41.6 + 1.5	67	25	51	26	21	32	29	31	3.12 + 2.1	6													
Raleigh.	376	103	110	29.60	30.11	-0.04	41.2 + 1.5	72	29	50	26	1	32	33	35	2.10 + 1.1	9	6,156	sw.	42	sw.	26	9	11	11	5.3	2.3			
Wilmington.	78	81	91	30.03	31.12	-0.05	44.5 + 2.7	71	17	53	25	23	36	27	31	1.81 + 1.3	8	5,461	w.	38	sw.	26	16	6	9	4.0	7.5			
Charleston.	48	11	92	30.08	31.13	-0.05	48.2 + 3.1	71	29	56	31	21	40	27	43	3.81 + 0.3	7	6,734	s.	47	s.	26	18	7	6	3.7	2.5			
Columbia, S. C.	351	41	57	29.74	30.14	-0.02	44.6 + 2.6	73	17	52	27	3	34	36	33	1.41 + 1.5	9	5,337	sw.	42	sw.	26	20	7	7	3.7	3.7			
Augusta.	189	83	97	29.94	30.14	-0.03	45.8 + 1.2	73	17	56	25	21	40	27	30	2.08 + 1.4	8	4,762	w.	40	sw.	26	18	6	8	4.1	T.			
Savannah.	63	150	194	30.07	30.14	-0.01	50.4 + 1.9	74	25	60	31	21	41	34	46	4.41 + 1.0	9	5,391	w.	52	w.	25	13	12	6	4.5	T.			
Jacksonville.	43	209	245	30.09	30.14	-0.06	53.8 + 1.4	75	17	64	32	21	44	34	51	3.46 + 0.5	9	6,9202	nw.	25	18	8	9	4	4	3.4				
Florida Peninsula.							64.1 - 1.7									77	2.18 + 0.2										4.3			
Key West.	22	10	64	30.06	30.08	-0.00	68.4 + 1.7	82	29																					

TABLE I.—Climatological data for United States Weather Bureau stations, December, 1915—Continued.

Districts and stations.	Elevation of instruments.			Pressure.		Temperature of the air.						Precipitation.		Wind.										
	Ft.	Ft.	Ft.	In.	In.	°F.	°F.	°F.	35.6	1.2	Mean max. + mean min. + 2.	Departure from normal.	Maximum.	Minimum.	Date.	Total.	Miles.	Direction.	Maximum velocity.	0-10 In.	7.5 In.	Total snowfall.	Show on ground at end of month.	
Ohio Valley and Tennessee.																								
Chattanooga.	762	180	213	29.31	30.14	-0.02	42.0	-0.6	62	23	49	27	21	34	27	37	31	70	5.788	s.	29	5	10	6.7 T.
Knoxville.	996	93	100	29.03	30.12	-0.04	34.8	+0.1	63	17	48	21	21	32	22	35	31	75	7.775	sw.	29	6	11	6.9 2.5
Memphis.	399	76	97	29.07	30.11	-0.04	45.0	+1.5	70	16	52	26	23	32	22	41	36	74	5.73	+1.4	12	6.856	s.	
Nashville.	546	108	191	29.51	30.11	-0.04	42.4	+1.3	69	16	50	26	21	33	22	37	63	6.44	+2.6	14	7.638	w.		
Lexington.	989	193	230	28.98	30.08	-0.06	35.9	+0.5	60	17	43	20	14	29	21	33	31	73	6.67	+3.4	13	10.776	sw.	
Louisville.	525	219	255	29.51	30.11	-0.06	36.7	+1.4	58	17	43	23	14	29	21	33	31	76	8.43	+4.7	13	9.013	s.	
Evansville.	431	72	82	29.16	30.08	-0.04	31.0	+1.6	60	16	43	23	14	29	21	33	31	76	6.97	+3.1	13	9.041	w.	
Indianapolis.	822	194	230	29.16	30.08	-0.04	31.0	+1.6	60	17	37	13	14	25	21	28	26	81	5.15	+2.1	13	9.011	w.	
Terre Haute.	575	96	129	29.48	30.07	-0.04	32.4	+4.0	49	17	38	13	14	25	21	28	26	81	4.59	+1.1	14	7.506	nw.	
Cincinnati.	628	11	51	29.39	30.09	-0.04	32.7	+3.7	55	17	40	14	15	26	21	28	26	76	4.15	+1.4	14	8.990	s.	
Columbus.	824	123	229	29.18	30.08	-0.04	31.0	+1.8	52	17	36	13	14	25	21	28	26	82	3.30	+0.7	15	8.519	sw.	
Dayton.	869	181	216	29.07	30.06	-0.04	31.6	+1.5	54	17	38	11	15	26	21	28	26	82	3.85	+1.1	17	9.514	w.	
Pittsburgh.	842	353	410	29.13	30.07	-0.04	31.8	+2.9	58	17	38	16	15	26	21	28	26	83	4.04	+0.6	18	8.452	w.	
Elkins.	1,040	41	50	29.96	30.11	-0.01	30.1	+2.4	57	17	38	11	15	26	21	28	26	79	5.24	+2.5	14	4.611	nw.	
Parkersburg.	638	74	84	29.43	30.11	-0.03	34.2	+1.0	58	17	40	18	15	26	21	28	26	84	0.01	more,	34	8.5	4.9	
<i>Lower Lake Region.</i>				<b>28.1 + 1.0</b>																		<b>8.4</b>		
Buffalo.	767	247	250	29.15	30.01	-0.05	27.8	+2.3	48	25	32	16	17	23	21	26	24	84	4.09	+0.7	21	14.064	w.	
Canton.	448	10	61	29.49	29.99	-0.05	23.1	+0.4	44	25	31	6	31	17	28	24	83	2.49	+1.1	19	6.811	w.		
Oswego.	335	76	91	29.61	30.00	-0.06	28.0	+1.2	45	25	35	11	17	23	21	26	24	83	3.78	+0.2	20	9.345	s.	
Rochester.	523	97	113	29.43	30.02	-0.04	28.0	+0.9	48	25	33	11	17	23	21	26	24	77	2.21	+0.7	22	7.255	w.	
Syracuse.	597	97	113	29.34	30.01	-0.05	27.1	+1.2	47	25	32	6	12	23	21	26	24	83	5.07	+2.4	20	9.142	s.	
Erie.	714	130	166	29.23	30.02	-0.05	30.0	+1.7	50	25	34	16	19	23	21	26	24	78	3.12	+0.1	17	12.304	nw.	
Cleveland.	762	190	201	29.20	30.03	-0.04	30.8	+0.3	52	25	35	17	15	23	21	26	24	80	1.75	+0.8	15	11.373	nw.	
Sandusky.	624	62	103	29.36	30.06	-0.03	30.0	+1.1	52	17	34	15	15	23	21	26	24	80	2.61	+0.3	11	10.073	w.	
Toledo.	628	208	248	29.36	30.07	-0.01	29.4	+1.1	46	17	31	17	15	23	21	26	24	79	2.50	+0.2	10	10.628	sw.	
Fort Wayne.	536	113	124	29.12	30.08	-0.07	27.6	+0.3	42	17	33	13	15	23	21	26	24	83	1.78	+0.8	13	7.514	sw.	
Detroit.	730	218	245	29.24	30.06	-0.01	27.8	+1.7	41	17	33	13	14	23	21	26	24	82	2.08	-0.3	14	9.327	w.	
<i>Upper Lake Region.</i>				<b>24.8 + 0.3</b>																		<b>7.8</b>		
Alpena.	609	13	92	29.34	30.05	+0.01	25.0	+0.2	36	13	30	9	29	20	23	24	84	1.34	-0.8	13	8.425	nw.		
Escanaba.	612	54	60	29.56	30.07	+0.03	24.3	+2.3	36	12	30	11	12	24	23	24	80	1.23	-1.0	13	6.148	nw.		
Grand Haven.	632	54	92	29.34	30.05	-0.06	27.6	+2.5	36	12	33	11	12	24	23	24	82	2.03	+0.3	14	8.314	e.		
Grand Rapids.	707	70	87	29.27	30.07	+0.02	27.0	+1.8	41	13	32	12	12	24	23	24	83	1.51	-1.4	15	4.678	e.		
Houghton.	684	62	72	29.24	30.03	+0.01	26.1	+2.3	38	12	30	11	12	24	23	24	83	2.50	-0.0	18	4.702	nw.		
Lansing.	878	11	62	29.07	30.04	-0.04	24.8	+2.0	39	13	31	11	12	24	23	24	81	0.88	-1.1	15	4.814	sw.		
Ludington.	637	60	66	29.32	30.04	-0.04	27.4	+1.4	43	13	31	11	12	24	23	24	81	1.01	-1.1	15	5.662	e.		
Marquette.	734	77	111	29.22	30.06	+0.04	24.6	+1.7	36	7	30	9	28	26	20	21	80	1.50	-0.8	15	5.762	e.		
Port Huron.	638	129	29.32	30.04	-0.05	26.4	+0.9	40	17	31	13	26	21	20	25	81	2.17	-0.4	17	6.988	w.			
Saginaw.	641	48	82	29.33	30.05	-0.05	25.0	+3.9	39	13	31	10	15	19	20	24	81	1.84	-0.3	12	8.909	nw.		
Sault Sainte Marie.	614	11	61	29.33	30.06	+0.06	21.6	+1.1	34	8	27	5	16	16	19	20	81	0.94	-1.0	12	6.723	w.		
Chicago.	823	140	210	29.16	30.08	-0.06	20.2	+0.2	42	13	34	5	16	16	19	20	81	0.89	-1.4	12	6.191	e.		
Green Bay.	617	109	144	24.36	30.05	+0.01	23.4	+2.1	40	7	29	5	28	18	20	23	81	1.31	-0.8	11	9.021	w.		
Milwaukee.	681	119	133	29.26	30.06	+0.00	26.8	+0.8	39	7	32	4	29	28	25	26	82	0.86	-1.0	8	7.035	sw.		
Duluth.	1,133	11	47	28.78	30.06	+0.01	18.6	+0.9	39	7	24	7	21	13	20	18	80	0.82	-0.4	8	8.457	w.		
<i>North Dakota.</i>				<b>16.9 + 5.0</b>																		<b>6.4</b>		
Moorhead.	940	8	57	29.01	30.07	-0.01	16.4	+5.7	41	7	24	-12	27	8	34	15	13	86	0.58	-0.2	8	6.070	nw.	
Bismarck.	1,674	8	57	28.20	30.07	-0.01	19.8	+4.8	44	22	30	-6	27	10	34	17	14	83	0.39	-0.2	8	5.954	nw.	
Devils Lake.	1,482	11	41	28.36	30.04	-0.04	14.2	+4.4	36	22	31	-14	17	31	10	26	13	86	0.61	+0.2	8	5.851	se.	
Williston.	1,372	40	47	27.94	29.99	-0.07	18.8	+5.2	42	3	27	-7	31	10	26	17	87	0.88	+0.2	10	5.208	w.		
<i>Upper Mississippi Valley.</i>				<b>28.0 + 0.6</b>																		<b>6.7</b>		
Minneapolis.	918	10	208	29.02	30.04	-0.06	22.6	+1.7	45	7	29	-3	27	16	24	-	81	0.46	-0.5	6	8.611	se.		
St. Paul.	831	201	236	29.12	30.07	-0.01	22.6	+3.3	47	7	29	-2	25	16	24	-	81	0.53	-0.5	6	8.756	se.		
La Crosse.	714	11	48	29.26	30.07	-0.01	23.5	+0.7	50	7	30	-9	28	17	25	-	81	0.64	-1.1	4	5.739	nw.		
Madison.	974	70	78	29.95	30.08	-0.06	23.9	+1.2	46	7	29	-1	25	19	23	-	81	0.75	-0.6	4	6.950	nw.		
Charles City.	1,015	10	49	28.96	30.08	-0.06	20.8	+1.8	47	7														

TABLE I.—Climatological data for United States Weather Bureau stations, December, 1915—Continued.

Districts and stations.	Elevation of instruments.		Pressure.		Temperature of the air.										Precipitation.		Wind.															
	Balometer above sea level.	Thermometer above ground.	Anerometer above ground.	Station, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean max. + mean min. + 2.1.	Mean maximum.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.	Mean wet thermometer dev point.	Mean temperature of the dew point.	Total.	Days with 0.01 or more.	Total movement.	Precipitation direction.	Miles per hour.	Direction.	Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness.	Total snowfall.	Show on ground at end of month.		
<i>Northern Slope.</i>																																
Haile.....	2,505	11	44	27.27	29.98	-0.07	24.1 + 3.2	55	8	34	-16	30	14	30	23	20	81	0.77 + 0.1	6	6,059	sw.	36	sw.	22	11	4	16	6.5	7.0	5.0		
Helena.....	4,110	87	114	25.74	30.06	-0.07	27.7 + 2.9	55	8	35	-11	30	25	23	17	65	0.86 + 0.1	6	6,025	sw.	25	4	15	12	6.4	6.3	1.2					
Kalispell.....	2,982	34	26.91	30.07	-0.00	23.3 - 0.6	46	21	30	-15	30	17	21	21	19	82	2.00 + 0.2	15	2.528	w.	22	s.	21	2	6	23	8.6	18.1	1.1			
Miles City.....	2,371	26	48	27.44	30.08	-0.02	27.5 + 6.5	50	8	36	-10	31	18	30	23	19	79	0.89 + 0.3	7	3,747	w.	30	ne.	25	14	11	6	4.1	7.1	3.2		
Rapid City.....	3,239	50	58	26.54	30.07	-0.02	29.4 + 3.4	60	6	41	-8	30	18	31	23	16	51	0.34 + 0.1	3	5,513	w.	29	n.	22	12	11	8	5.1	8.5	1.6		
Cheyenne.....	6,088	81	101	23.91	30.01	-0.03	28.2 + 0.2	58	9	40	-3	30	18	31	23	16	63	0.41 + 0.1	7	11,750	w.	22	s.	22	8	12	11	6.0	5.7	1.9		
Lander.....	5,372	60	68	24.58	30.12	-0.03	22.3 + 3.7	55	6	37	-24	31	9	37	18	12	65	1.51 + 0.8	7	3,029	w.	32	nw.	23	11	15	5	5.2	19.3	8.2		
Sheridan.....	3,740	10	47	26.04	30.09	-0.00	24.8 - 1.1	62	9	36	-16	30	13	40	20	16	76	0.84 + 0.1	3	4,35	w.	17	12	3	16	6.2	8.3	2.3				
Yellowstone.....	6,200	11	48	23.81	30.13	-0.02	19.6 - 2.0	43	9	28	-18	30	11	28	18	14	76	0.89 + 0.9	17	6,957	s.	30	dw.	29	5	8	18	6.8	9.4	7.1		
North Platte.....	2,821	11	51	27.07	30.11	+ 0.01	28.2 + 1.0	64	4	40	-2	27	16	46	23	18	72	0.82 + 0.4	8	4,701	w.	31	n.	10	13	4	14	5.4	6.1	1.8		
<i>Middle Slope.</i>							35.8 + 2.8									68	0.38 + 0.4											4.5				
Denver.....	5,291	129	172	24.66	30.04	-0.04	33.0 + 0.8	70	9	46	-1	27	20	41	25	15	55	0.63 + 0.0	6	6,022	sw.	46	nw.	23	14	13	4	1.3	10.1	3.0		
Pueblo.....	4,685	80	89	26.24	30.09	-0.04	32.6 + 0.9	72	9	48	-4	28	17	52	26	17	60	0.35 + 0.1	4	4,730	nw.	40	dw.	25	16	12	3	3.5	4.7	0.8		
Concordia.....	1,392	50	58	28.55	30.07	-0.04	33.4 + 3.9	65	22	42	6	28	24	31	24	26	80	0.40 + 0.1	9	5,572	nw.	36	dw.	18	12	5	14	5.6	2.0	T.		
Dodge.....	2,509	11	51	27.40	30.08	-0.02	34.6 + 3.0	73	22	47	0	28	28	30	27	23	72	0.23 + 0.3	5	6,518	n.	37	n.	26	14	9	8	4.5	1.7			
Wichita.....	1,358	139	158	28.55	30.02	-0.09	37.0 + 3.4	65	9	48	-7	18	28	32	32	27	70	0.40 + 0.4	4	9,304	s.	52	n.	10	15	5	11	4.8	2.5			
Oklahoma.....	1,214	10	47	28.74	30.05	-0.06	43.4 + 4.8	73	9	54	19	28	32	34	36	30	68	0.33 + 1.4	4	10,550	s.	48	n.	24	17	5	9	4.5	T.			
<i>Southern Slope.</i>							46.4 + 2.6									59	0.51 + 0.4											3.9				
Abilene.....	1,738	10	52	28.19	30.03	-0.08	49.1 + 4.1	77	5	62	21	2	36	41	40	31	58	0.77 + 0.4	5	8,422	s.	39	sw.	26	15	5	11	4.7	T.			
Amirillo.....	3,676	10	49	26.23	30.02	-0.07	40.2 + 3.8	73	22	50	8	28	27	42	33	27	69	0.13 + 0.7	3	8,275	w.	40	n.	24	22	5	4	3.5	0.2			
Del Rio.....	944	61	71	29.04	30.04	-0.06	54.0 + 1.6	79	10	66	28	25	42	38	33	31	64	0.14 + 0.8	4	6,881	nw.	40	nw.	27	12	7	4.2					
Roswell.....	3,566	75	85	28.36	30.03	-0.04	42.1 + 0.9	70	4	56	1	28	28	43	33	22	51	0.99 + 0.4	3	5,436	n.	44	nw.	10	19	7	5	3.2	1.5			
<i>Southern Plateau.</i>							44.1 + 0.8									54	0.86 + 0.3												3.4			
El Paso.....	3,762	110	133	26.20	30.02	-0.01	44.8 + 0.0	71	31	58	13	28	32	37	36	24	49	0.43 + 0.1	4	7,086	nw.	54	sw.	31	16	8	7	3.7	0.2			
Santa Fe.....	7,013	57	66	23.19	30.06	-0.00	32.1 + 1.8	57	7	42	2	28	22	28	25	19	64	0.97 + 0.2	7	5,936	n.	31	sw.	31	15	9	7	4.3	9.5	3.8		
Flagstaff.....	6,908	8	57	28.84	30.02	-0.02	51.0 - 0.3	78	1	62	28	28	40	38	43	33	55	2.54 + 2.0	6	3,720	e.	23	nw.	26	15	11	5	3.9				
Phoenix.....	1,108	76	81	28.84	30.02	-0.02	51.0 - 0.3	78	1	62	28	28	40	38	43	33	55	0.12 + 0.3	2	4,298	n.	25	n.	26	25	4	2	1.9				
Yuma.....	141	9	54	23.87	30.02	-0.03	54.4 - 1.3	78	7	68	28	28	41	45	48	30	46	0.26 + 0.5	3	5,070	n.	36	se.	13	14	11	6	T.				
Independence.....	3,910	11	42	26.01	30.06	-0.06	37.4 - 4.2	67	23	50	10	31	25	42	42	32	76	1.71 + 0.4	3	4,355	nw.	48	s.	28	5	14	7	9	15	6.3	13.8	10.0
<i>Middle Plateau.</i>							31.9 + 0.7									70	1.11 + 0.1	5	4,533	w.	44	s.	3	10	10	11	5.6	0.5	T.			
Reno.....	4,532	74	81	25.48	30.10	-0.02	36.3 + 2.6	66	8	47	4	31	26	38	31	24	64	1.09 + 0.6	5	4,533	w.	44	s.	3	10	10	11	5.6	0.5	T.		
Tonopah.....	6,090	20	24	34.05	30.11	-0.06	31.3 + 1.1	60	52	33	4	31	24	27	21	26	66	0.68 + 0.1	4	7,809	se.	40	nw.	23	13	8	10	5.1	0.4	0.1		
Winnebucca.....	4,344	18	56	25.64	30.12	-0.06	30.7 - 0.0	60	3	41	-6	31	20	31	27	23	74	1.22 + 0.2	2	4,788	ne.	32	sw.	3	5	9	17	6.7	3.5	0.3		
Modena.....	5,479	10	43	24.62	30.10	-0.02	28.8 - 2.9	58	23	41	-13	30	17	37	21	18	68	0.80 + 0.2	3	6,515	w.	39	sw.	14	12	9	10	5.1	5.4	0.0		
Salt Lake City.....	4,360	147	126	25.64	30.10	-0.02	33.7 + 1.5	54	4	41	5	31	27	21	29	24	69	1.71 + 0.4	3	4,355	nw.	48	s.	28	5	14	7	8	18	6.8	9.8	5.2
Grand Junction.....	4,602	82	96	25.42	30.08	-0.02	30.2 + 2.0	55	14	39	10	28	22	27	26	22	76	1.15 + 0.7	3	3,733	se.	28	s.	14	7	9	15	6.3	13.8	10.0		
<i>Northern Plateau.</i>							32.2 + 0.2									75	1.58 + 0.2											8.0				
Baker.....	3,471	48	53	26.47	30.16	-0.06	26.0 - 1.4	51	8	34	-12	30	18	27	25	21	78	1.98 + 0.5	18	5,189	se.	34	se.	3	2	7	23	8.1	21.9	6.0		
Hoise.....	2,739	78	60	27.23	30.16	-0.04	33.6 + 1.4	60	41	-2	31	24	30	30	24	70	1.56 + 0.2	19	4,679	se.	34	ne.	3	4	5	29	7.9	4.0	1.4			
Lewiston.....	757	40	48	29.26	30.09	-0.04	36.1 - 1.4	59	21	43	11	30	20	23	20	73	0.93 + 0.6	13	3,578	e.	26	s.	24	2	9	20	7.9	2.0				
Pocatello.....	4,477	46	54	25.49	30.13	-0.06	28.4 - 0.0	52	36	-16	31	20	31	25	20	73	0.98 + 0.1	14	6,720	se.	34	sw.	23	10	19	7.4	5.5	4.0				
Spokane.....	1,929	101	110	27.97	30.08	-0.05	30.1 + 0.2	50	36	1	30	25	29	29	27	76	0.20 + 0.6	16	4,079	sw.	37	sw.	21	1	6	24	8.4	11.7	1.0			
Walla Walla.....	901	57	65	28.97	30.06	-0.06	38.2 + 2.2	66	8	45	12	30																				

TABLE II.—Accumulated amounts of precipitation for each 5 minutes, for the principal storms in which the rate of fall equaled or exceeded 0.25 inch in any 5 minutes, or 0.80 in 1 hour, during December, 1915, at all stations furnished with self-registering gages.

\* Self-register not working.

TABLE II.—Accumulated amounts of precipitation for each 5 minutes, for the principal storms in which the rate of fall equaled or exceeded 0.25 inch in any 5 minutes, or 0.80 in 1 hour, during December, 1915, at all stations furnished with self-registering gages—Continued.

Stations.	Date.	Total duration.		Total amount of precipitation.	Excessive rate.		Amount before excessive rate began.	Depths of precipitation (in inches) during periods of time indicated.													
		From—	To—		Began—	Ended—		5 min.	10 min.	15 min.	20 min.	25 min.	30 min.	35 min.	40 min.	45 min.	50 min.	60 min.	80 min.	100 min.	120 min.
Madison, Wis.	16			0.24															*		
Marquette, Mich.	16-20			0.89															*		
Memphis, Tenn.	16-17	3:45 p. m.	10:40 a. m.	1.34	6:04 p. m.	6:20 p. m.	0.02	0.15	0.27	0.37	0.42	0.52	0.63	0.65	0.79	0.87					
Meridian, Miss.	28	6:40 a. m.	D. N. p. m.	4.37	(12:28 p. m.) (3:44 p. m.)	1:13 p. m. 4:19 p. m.	1.71 3.03	.10 .10	.16 .23	.35 .32	.45 .42	.51 .58	.63 .63								
Miami, Fla.	25			1.17															0.53		
Milwaukee, Wis.	11-12			0.45														*			
Minneapolis, Minn.	16-17			0.40														*			
Mobile, Ala.	28			2.03														.69			
Modena, Utah	4			0.26														.12			
Montgomery, Ala.	{ 17 28	8:25 a. m. 10:10 a. m.	3:15 p. m. D. N. p. m.	2.97 3.58	11:56 a. m. 7:16 p. m.	1:40 p. m. 7:48 p. m.	.36 2.56	.08 .08	.24 .22	.35 .40	.50 .46	.77 .47	.90 .54	.92 .57	.98 .98	1.15 1.15	1.18 1.18	1.35 1.43	2.02 2.32		
Moorhead, Minn.	16			0.22														*			
Mount Tamalpais, Cal.	12-14			1.93														*			
Nantucket, Mass.	13			0.97														.46			
Nashville, Tenn.	17-18			1.94	7:05 a. m.	D. N. a. m.	.07	.09	.33	.56	.85	.97	1.01								
New Haven, Conn.	13-14			2.80														*			
New Orleans, La.	{ 17 28	D. N. a. m. 10:30 a. m.	1:15 p. m. 6:40 p. m.	2.13 1.74	7:34 p. m. 2:21 p. m.	7:55 p. m. 3:21 p. m.	1.12 .26	.27	.57	.62	.76	.80	.83	1.00	1.19	1.23	1.36				
New York, N. Y.	13-14			1.73														.23			
Norfolk, Va.	28-29			1.21														.47			
Northfield, Vt.	25-26			1.25														*			
North Head, Wash.	6-8			3.05														.36			
North Platte, Nebr.	15-16			0.37														*			
Oklahoma, Okla.	15-16			0.26														.09			
Omaha, Nebr.	16			0.14														*			
Oswego, N. Y.	2-3			1.46														*			
Palestine, Tex.	16-17			1.50														.53			
Parkersburg, W. Va.	16-18			2.70														*			
Pensacola, Fla.	28	10:00 a. m.	1:10 p. m.	1.83	11:40 a. m.	12:50 p. m.	.24	.10	.14	.33	.68	.98	1.13	1.23	1.24	1.25	1.26	1.52	1.59		
Peoria, Ill.	10-11			0.63														*			
Philadelphia, Pa.																					
Phoenix, Ariz.	30-31			1.97														.22			
Pierre, S. Dak.	29-30			0.16														*			
Pittsburgh, Pa.	29			1.11														.21			
Pocatello, Idaho	28-29			0.37														*			
Point Reyes Light, Cal.	12-13			2.14														.33			
Port Huron, Mich.	24-25			0.77														*			
Portland, Me.	13-14			1.60														*			
Portland, Oreg.	4-5			1.83														.33			
Providence, R. I.	18			1.17														*			
Pueblo, Colo.	15			0.23														*			
Raleigh, N. C.	29			0.49														.34			
Rapid City, S. Dak.	29			0.22														*			
Reading, Pa.	17-18			1.85														.26			
Red Bluff, Cal.	3	1:18 p. m.	1:50 p. m.	0.52	1:31 p. m.	1:46 p. m.	.03	.14	.28	.48											
Reno, Nev.	13			0.61														*			
Richmond, Va.	28-29			0.60														.18			
Rochester, N. Y.	29			0.68														*			
Roseburg, Oreg.	24-25			0.36														.25			
Roswell, N. Mex.	6																	.13			
Sacramento, Cal.	2-3			1.78														.55			
Saginaw, Mich.	24-25			0.38														*			
St. Joseph, Mo.	23-24			0.74														*			
St. Louis, Mo.	24			1.18														*			
St. Paul, Minn.	16-17			0.47														*			
Salt Lake City, Utah	25			0.62														*			
San Antonio, Tex.	6	4:38 a. m.	11:15 a. m.	1.00	9:36 a. m.	10:00 a. m.	.09	.08	.10	.18	.28	.66	.92								
San Diego, Cal.	4	3:25 a. m.	6:15 a. m.	0.50	3:57 a. m.	4:02 a. m.	.08	.28													
Sand Key, Fla.	11	8:40 a. m.	3:35 p. m.	1.61	9:30 a. m.	9:40 a. m.	.03	.16	.30												
Sandusky, Ohio	24-25			1.04																	
San Francisco, Cal.	2-3			3.41														.45			
San Jose, Cal.	3-4			2.80														.68			
San Luis Obispo, Cal.	3-4	5:08 p. m.	3:45 p. m.	2.10	7:04 p. m.	7:17 p. m.	.33	.11	.33	.38								*			
Santa Fe, N. Mex.	26-27			0.49														*			
Sault Ste. Marie, Mich.	28			0.28														*			
Savannah, Ga.	11			0.54														.40			
Scranton, Pa.	17-18			1.57														*			
Seattle, Wash.	19-21			1.84														*			
Sheridan, Wyo.	9-10			0.28														*			
Shreveport, La.	31			1.16														.51			
Sioux City, Iowa.	16			0.32														.55			
Spokane, Wash.	7			0.35														*			
Springfield, Ill.	10-12			0.57														*			
Springfield, Mo.	16			0.77														*			
Syracuse, N. Y.	29			1.23														*			
Tacoma, Wash.	18-21			3.05														*			
Tampa, Fla.	20			1.39														.48			
Tatoosh Island, Wash.	7-8			2.84														.50			
Taylor, Tex.	7-8	10:44 a. m.	6:30 p. m.	2.18	11:44 a. m.	1:24 p. m.	.10	.13	.16	.19	.25	.32	.43	.64	.78	.85	1.00	1.04	1.13	1.69	1.78
Terre Haute, Ind.	24			1.12														*			
Thomasville, Ga.	17			0.66														.43			
Toledo, Ohio.	24-25			1.14														*			
Tonopah, Nev.	4			0.79														*			
Topaka, Kans.	10			0.68														.31			
Valentine, Nebr.	15-16			0.22														*			
Vicksburg, Miss.	30-31	11:55 p. m.	6:28 a. m.	0.68	1:38 a. m.	1:54 a. m.	.11	.12	.30	.37	.40							*			
Walla Walla, Wash.	16			0.58														*			
Washington, D. C.	16-18			0.95														.40			
Wichita, Kans.	24																				

TABLE III.—*Data furnished by the Canadian Meteorological Service, December, 1915.*

Stations.	Pressure.			Temperature.						Precipitation.		
	Station, reduced to mean of 24 hours.	Sea-level reduced to mean of 24 hours.	Depart- ture from normal.	Mean max.+ mean min.+2.	Depart- ture from normal.	Mean maxi- mum.	Mean mini- mum.	Highest.	Lowest.	Total.	Depart- ture from normal.	Total snowfall.
St. Johns, N. F.....	Inches.	Inches.	Inches.	° F.	° F.	° F.	° F.	° F.	° F.	Inches.	Inches.	Inches.
29.48	29.62	-0.21	.14	32.8	+ 1.1	36.4	29.1	49	18	5.45	+0.42	4.0
Sydney, C. B. I.....	29.71	29.75	-.14	33.2	+ 5.0	38.1	28.3	51	10	5.84	+1.21	17.0
Halifax, N. S.....	29.70	29.81	-.15	32.1	+ 1.5	37.7	26.4	52	11	5.76	+0.64	17.5
Yarmouth, N. S.....	29.70	29.77	-.21	33.2	+ 2.5	38.0	28.3	52	17	4.77	-0.27	6.1
Charlottetown, P. E. I.....	29.75	29.79	-.15	30.8	+ 6.5	35.0	26.6	48	15	5.06	+1.40	9.6
Chatham, N. B.....	29.81	29.83	-.11	27.0	+10.0	32.3	21.8	48	8	4.35	+1.13	23.8
Father Point, Que.....	29.87	29.87	-.08	24.2	+ 8.8	28.2	20.3	36	6	3.27	+0.44	29.1
Quebec, Que.....	29.60	29.94	-.07	21.4	+ 6.2	26.3	16.1	38	- 3	3.62	-0.07	28.6
Montreal, Que.....	29.75	29.97	-.06	23.8	+ 5.5	28.7	18.9	39	5	4.01	+0.36	25.9
Stonecliffe, Ont.....	29.38	30.01	.00	17.0	+ 2.0	24.1	9.8	32	- 11	1.94	-0.55	19.3
Ottawa, Ont.....	29.72	30.03	+.04	21.0	+ 1.0	27.3	14.5	37	- 8	4.88	+1.97	39.9
Kingston, Ont.....	29.68	30.00	-.04	25.6	+ 1.9	32.5	18.8	41	6	2.99	-0.25	13.9
Toronto, Ont.....	29.59	29.99	-.06	27.6	+ 0.6	33.0	22.2	41	10	2.52	-0.39	17.5
White River, Ont.....	28.64	30.01	+.04	11.1	+ 1.4	21.7	6.6	31	-18	1.80	+0.09	18.0
Port Stanley, Ont.....	29.36	30.02	-.05	27.0	- 1.4	33.1	20.9	48	7	3.50	+1.08	21.5
Southampton, Ont.....	29.28	30.00	-.05	26.5	- 0.2	31.6	21.4	38	6	4.31	+0.33	39.3
Parry Sound, Ont.....	29.28	30.01	.00	21.0	- 0.2	28.0	14.0	39	- 2	2.99	-1.58	25.7
Port Arthur, Ont.....	29.32	30.05	+.06	19.5	+ 6.3	27.0	12.0	37	- 5	1.30	+0.48	15.0
Winnipeg, Man.....	29.17	30.01	+.02	11.7	+ 7.6	19.0	4.4	31	-18	1.69	+0.78	16.8
Minnedosa, Man.....	28.10	30.01	-.01	3.4	+ 3.7	16.9	1.8	33	-22	0.69	+0.07	6.9
Qu'Appelle, Sask.....	27.59	29.93	-.07	12.6	+ 5.2	20.5	4.6	42	-16	0.96	+0.44	8.4
Medicine Hat, Alberta.....	27.52	29.86	-.11	26.1	+ 7.9	35.2	17.0	53	- 3	0.14	-0.41	1.4
Swift Current, Sask.....	27.26	29.93	-.03	20.2	+ 4.2	29.8	10.6	51	-10	1.31	+0.53	13.0
Calgary, Alberta.....	26.26	29.90	-.04	23.9	+ 1.7	33.8	14.0	51	- 9	0.30	-0.29	3.0
Banff, Alberta.....	25.23	30.01	+.07	17.3	- 1.8	25.2	9.4	42	-19	1.53	+0.32	14.5
Edmonton, Alberta.....	27.48	29.84	-.09	19.0	+ 5.9	27.9	10.0	41	- 6	0.54	-0.16	5.4
Prince Albert, Sask.....	26.28	29.92	-.09	8.1	+ 5.3	16.4	- 0.2	32	-20	1.13	+0.41	11.5
Battleford, Sask.....	28.13	29.95	-.04	11.5	+ 6.1	19.6	3.3	30	-13	0.20	-0.12	2.0
Kamloops, B. C.....	28.72	30.04	+.10	29.6	+ 0.7	35.1	24.1	47	- 2	1.60	+0.82	13.8
Victoria, B. C.....	29.70	29.96	-.01	41.4	+ 0.2	45.0	37.5	51	- 27	4.78	-3.20	0.2
Barkerville, B. C.....	25.50	29.90	+.02	20.0	- 0.9	25.7	14.3	39	- 7	4.85	+1.68	43.5
Hamilton, Bermuda.....	29.91	30.08	-.04	61.6	- 3.1	66.8	56.5	71	49	2.88	-1.61	.....

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